

Overview

There are a number of different types of lines that may be visible on prismatic reflective sheeting. It is important that users be able to distinguish between them, and to understand the purpose and causes of these lines when manufacturing signs.

Seal Legs and Primary Groove Lines

“Seal legs” are the lines created by the perimeter of the diamond pattern, sealing in the prismatic components of the sheeting. The “primary groove line” can be a helpful tool to determine the sheeting’s orientation. When the primary groove line (which is oriented parallel to the flat sides of the diamond chain links) runs vertically on a completed sign, the sheeting is said to be in a 0° orientation. When the primary groove line is horizontal on a completed sign, the sheeting is said to be in a 90° orientation. See Figure 1.

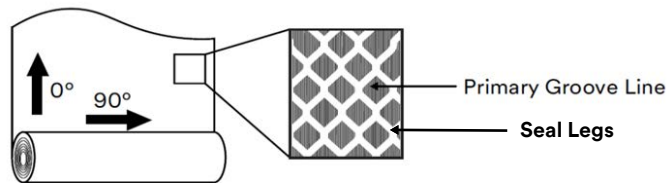


Figure 1. Primary groove lines as used to define sheeting orientation.

Signs and applied copy (letters, arrows, borders, and shields) can usually be fabricated and installed using whichever application orientation most efficiently utilizes the reflective sheeting without impacting sign functionality on the road. All copy must be oriented in the same direction to achieve uniform appearance. In cases where a sign’s location and/or position calls for extra-wide entrance angularity performance, or if a specific installation direction is required in a customer specification, a 0° orientation is recommended.

NOTE

3M recommends applying all background panels with the same sheeting orientation when constructing any multi-panel sign.

Fabrication Lines

The manufacturing process for prismatic sheeting results in the presence of fabrication lines in the final product, as shown in Figure 2. The sheeting’s fabrication lines are slightly thicker than its seal pattern legs, and may be noticeable under shop lights. However, they are generally not observable on the road, either in daylight or at night, under typical use conditions.

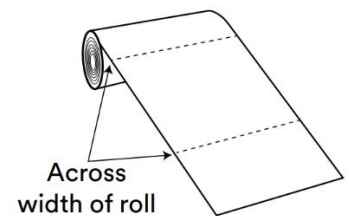


Figure 2. Fabrication Lines

Conclusion

The presence of primary groove lines, seal legs, and fabrication lines do not impact sign functionality on the road under typical use conditions.

Health and Safety

Tools and Equipment Usage

When using any equipment, always follow the manufacturer’s instructions for safe operation.

Warranty Information

Technical Information

Technical information, guidance, and other statements provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license to any intellectual property rights is granted or implied with respect to this technical information.

Product Selection and Use

Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. Customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment, reviewing all applicable regulations and standards, and reviewing the product label and use instructions. Failure to properly evaluate, select, and use a 3M product in accordance with instructions or to meet all applicable safety regulations may result in injury, sickness, death, and/or harm to property.

Warranty, Limited Remedy, and Disclaimer

Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability

Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.

Commercial Branding and Transportation

3M Center, Building 223-3N-30
St. Paul, MN 55144

1-800-328-3908
3M.com/windowfilm

© 3M 2025. All rights reserved.
3M is a trademark of 3M.
Used under license in Canada.
All other trademarks are property of their respective owners.
Revision A, September 2025 Please recycle.

